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UNIVERSITY OF GEORGIA

THE *Chemist*

MAY, 1947



VOLUME XXIV, No. 5

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STEP 1

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STEP 2

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STEP 3

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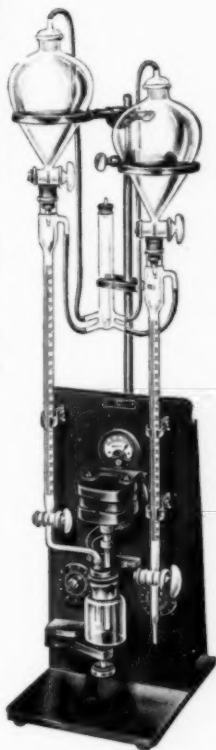
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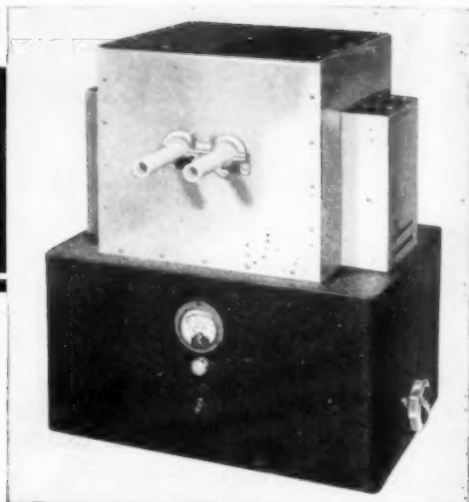


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The Chemist

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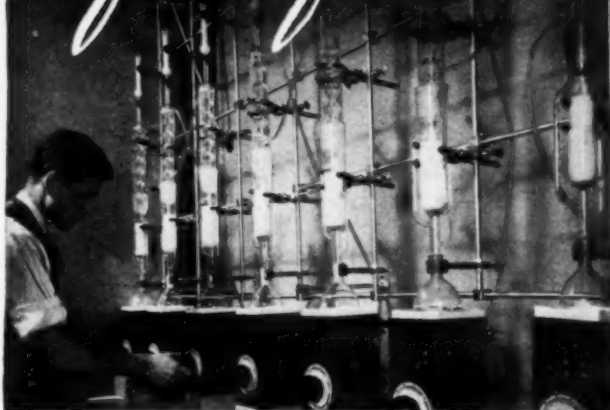
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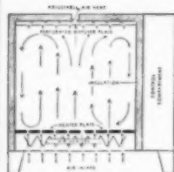
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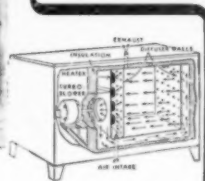
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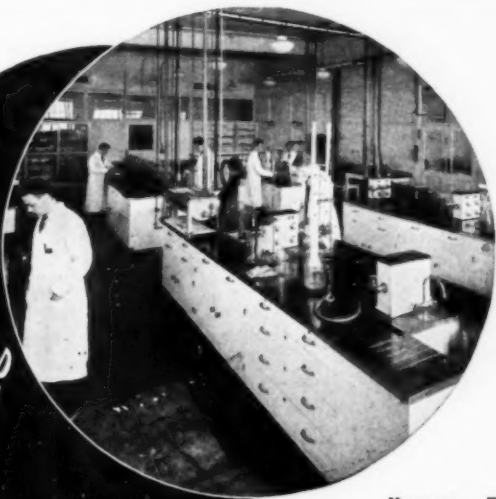
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FRIDAY, MAY 2, 1947

PROGRAM

9:30 A.M.—Registration (Registration Fee \$1.00) East Ballroom.

10:00 A.M.—Business Meeting. Discussion of Coalition. East Ballroom.

11:30-1:30 P.M.—Meeting and Luncheon of the National Council.

2:00-5:00 P.M.—Annual Meeting. East Ballroom.

"The Professional Status of the Chemist in England",
Dr. L. A. Jordan, Director, Paint Research Station,
Teddington, Middlesex, England.

"The Professional Status of the Chemist in Canada",
Dr. R. R. McLaughlin, Head of the Department of
Chemical Engineering, University of Toronto, Canada.

"The Professional Status of the Chemist in the United
States", Dr. Clifford F. Rassweiler, Vice President,
Research and Development, Johns Manville Company.

3:40 P.M.—Annual Business Meeting. A.I.C. Committee Reports.
Election of Councilors. New Business. Adjournment.

6:15 P.M.—Reception and Cocktail Party to the Medalist, Dr.
M. L. Crossley. West Ballroom.

7:00 P.M.—Medal Award Banquet. East Ballroom.

Toastmaster:

Dr. Foster D. Snell, President of The American
Institute of Chemists.

"Crossley As I Know Him":

Dr. Henry M. Wriston, President of Brown Uni-
versity.

"The Scientific Achievements of Dr. Crossley":

Dr. Arthur J. Hill, Director of Sterling Chemistry
Laboratory, Yale University.

"Crossley in Industry":

Mr. S. C. Moody, Vice President, American Cyanamid
Company and General Manager, Calco Chemical
Division.

Medal Presentation:

Dr. Foster D. Snell.

Acceptance Address:

"Research and Human Welfare", Dr. M. L. Crossley,
Director of Research, American Cyanamid Company.

Can Research Be Managed?

A symposium held by the Chicago Chapter, A.I.C., February 7th

Research Can and Should Be Managed

Dr. H. E. Robinson

*Assistant Director of Research,
Research Laboratories, Swift & Company, Chicago*

IT IS OBVIOUS that we cannot manage research in a militaristic fashion or by straight line organization. Neither can we fundamentally subscribe to an industrial research organization which is based on the individualism of the upper stories of the "Ivy Tower" without direction to a useful purpose.

With the possible exception of certain projects of a very narrow scope, no academic or industrial research organization has ever proceeded successfully on an individualistic basis which sets the research scientist upon a pedestal, completely unrestrained and uncoordinated. Such freedom would be even less conducive to results than the completely dissimilar situation in which the director of the laboratories is the general of the army and speaks to, and deals only, with his next in command. Neither isolation without cooperative action nor the Prussian militaristic machine can properly coordinate all the intricate phases of modern research, yet both are often considered as major ills in research management. It would seem

logical to strive to find a common-sense middle ground.

Research can be managed, and it should and must be managed, to achieve the tremendous benefits that a proper organization of scientific workers can give to the industrial concern. There are many facets which must be ground into the gem of a successful industrial research group. All are equally important and must include:

- (a) The attitude and expectations of commercial management and administration.
- (b) The detailed organizational set-up for research.
- (c) The scientific and personal qualifications of the research administrator and/or research director.
- (d) The personal and scientific understanding and ability of the research worker.
- (e) The ability of the research organization to promote and establish its rightful position in the company as a whole.

Most commercial concerns today appreciate that a good research organ-

ization, properly fitted to the business, is not only essential to the maintenance of high quality in products; to improvements and new adaptations in processing and sales, but it is a vital key to the long-range success of the business. Not all industrialists realize that the accomplishments of research are only occasionally spectacular, and that the greatest services are rendered in the day-by-day assistance in small things and in the slow, long-range programs for future advancements. When the industry, or the individual company, understands the tremendous insurance offered by properly organized and conducted research, and when it realizes that research at times must have disappointing and expensive set-backs, only then can it be assured of success in utilizing research to major advantage.

The next step is to organize or reorganize the research department. A slow, steady, and thereby, sound growth, is demanded. It is usually unwise to organize immediately on a large scale, or to undertake too rapid an expansion in a period of favorable markets and at high economic levels. There are many types of research organization possible, but they should fit the pattern of the business that they serve. In our laboratories, we have found it expeditious to build along the following lines:

1. Process and product control,

2. Process and product development and improvement research.
3. Science research for assistance to and coordination with process and product research.
4. Fundamental research on specific projects which cannot be better or more readily handled by academic research groups.
5. Scientific consultation in manufacturing and sales.
6. Technical sales service.

In our research organization we have created research divisions based on products and process or on a science. Each research division has a group leader and there are two to eight research workers associated with that leader. A number of these divisions are then coordinated by the director of research and two assistant directors of research. The top scientific administrative position is held by a fully qualified scientist who most fortunately come up through the ranks in the research organization.

The divisional set-up gives ample opportunity for prestige advancement in research and for administrative training of young men who have shown superior capabilities. It also allows for the creation of new product and scientific divisions as sound research expansion is indicated. We have, each year for the past several years, properly added one or two new research divisions. Research directors act in an advisory and policy making capacity, and the individual

CAN RESEARCH BE MANAGED

research worker has ready access to the vice president in charge of research at any time that a consultation is reasonably indicated. The major points are that there must be opportunities for prestige, administrative, and scientific advancement for the research worker and for needed expansion of research without disruption of the general organization.

The relationship of the "boss" and "bosses" with the individual scientist is one of greatest importance in obtaining a type of research management which is capable of continued success. While it is not an absolute essential, it is a great help to the scientist and to scientific prestige to have the top man in the research organization also be an officer of the company, reporting directly to the head of the business. There are many companies in which the chief of the research division is not trained in fundamental science, but he has acquired an understanding and appreciation of scientific efforts. There are, unfortunately, other instances in which research administrators concern themselves primarily with the effect of research in relation to immediate sales and operations, and are not concerned with the scientist himself or with scientific methods. The ideal situation is the one in which the top research manager is both an able scientist, experienced in the business, and a top ranking administrative officer.

In any event, the research officer

and/or the research director have certain obligations to their scientific staff and to the individual research worker. They must be certain to establish a program for the indoctrination and training of the young scientist who is just beginning his career. All too frequently this important consideration is neglected, largely through a demand for the solution to pressing problems. Too many research workers today are complaining that they were never given an opportunity to learn the policies of the company, to know the products and future plans of the company. Sometimes the complaint has been that the researcher never had an opportunity to become acquainted beyond his small niche in the laboratory division. It is obvious that the personal relationships of the research director with his staff, or of the assistant directors, or of the section or group leaders, are of extreme importance to the maintenance of high morale, which is as necessary to research workers as to any other type of industrial employee. The research executive must know reasonably well what the individual worker is doing; must know him well enough to realize and understand his ambitions, his frustrations, and even some of the more important personal problems that he may have. He must do all that he can in a reasonable fashion to promote confidence in the individual by making certain that the worker is fully informed on all matters which

come under his responsibility. He must encourage the research worker in his professional activities and advise him on personal problems when assistance is sought.

The question of human relationships is of major importance. The director must strive constantly for a fair status for the individual, and to carry out all earned advancements which may be to the individual's best interest. All of this adds up only to doing those things which create loyalty, confidence, and admiration on the part of the worker for the "boss." All of the scientific ability in the world can be wasted unless the individual worker wants to make good because of his pride in his organization and company. Thus by pride of accomplishment, the well-loved and mild-mannered executive will accomplish far more with his research staff, than would the more brilliant scientist who neglects or over-rides human relationships. The successful research manager must have a close human understanding and working relationship with those departments of sales and manufacturing with which he is most closely associated in the business. He must give more than full credit to the men who work with him and must give them an equal opportunity to gain the confidence of the other divisions of the industry of which they are all a part.

Now suppose we reverse the situa-

tion and consider the obligations of the research worker to the "boss." Once again it is only a question of proper industrial and human relationships. No good executive wants to be followed, but he does and must insist on being kept properly informed on all matters pertaining to the research program for which he has been made responsible. There must be loyalty and an understanding of the problems and assignments of the director. Ambition and aggressiveness are as vital in research as in any other field of endeavor. In making a start in research, and frequently as his work progresses, the individual must do a certain number of routine and menial tasks. It is always to his advantage to accomplish these as thoroughly as though he were on the threshold of a blazing new discovery. But many young men today came fresh out of our colleges to employment at reasonably good salaries. Their academic advancements and their salary lend them a false impression that they have already achieved success and that they merit the avoidance of small jobs and hard work.

It is more than ever essential today that the individual worker be the type who aggressively follows through on all assignments and does not alibi that he is waiting for someone in the plant or in the office of his company to take the next step. Ingenuity and brilliance must still be served by

CAN RESEARCH BE MANAGED

plain, old-fashioned hard work.

The individual research worker must have all freedom of action commensurate with a coordinated research program. He should have certain personal liberties and should in no respect be expected to punch a time clock either literally or figuratively. On the other hand he must appreciate that the easiest thing in the world is to abuse privilege and to side-step responsibility. Every chemist should fight and fight hard for his right to a salary commensurate with his ability and contributions to the company. He should remember, however, that his mere length of time in an organization is not a sound basis for salary increases. He should not have been timid in explaining his new ideas, and oftentimes thereby increasing his own undertakings. Loyalty to the organization and to research management will always be of the greatest advantage to the individual chemist. The researcher should not bury himself, either in his work within the organization or in his personal life without. Association with, and actual participation in, the activities of scientific and other societies are a broadening experience, leading to the ability to assume greater responsibility and to make increased accomplishments in the business world.

One of the problems that is most often brought up in discussions of research management is that concerning the assignment of research projects

and the relationship of supervision to freedom in methods and to the development of new ideas. When the new scientist is just beginning his career, it is essential that his early efforts be directed to research projects or portions of projects in which he can hope to achieve some success. If the chemist or engineer is turned loose on a major problem immediately after entering the organization he cannot help but fumble and make a great many unnecessary mistakes. The mere achievement of an advanced degree in science is no assurance that the worker is fully grounded in scientific method. On the other hand there have been cases in industrial research laboratories and in the universities wherein a very strong scientist leading a particular field of work has completely dominated the research efforts of his assistants or advanced students. Research should always begin with freedom to try new methods in approaching and solving the problem. This is in no wise inconsistent with a very strong coordination of the work during the indoctrination of the research worker into the organization as a whole.

Among some research leaders there is too often the tendency to tell the young worker that his enthusiastic ideas are all wrong, or that the idea has been tried twenty years before with no success. It is almost impossible for a man who has had a broad experience in a certain research field

not to develop certain definite convictions with regard to ideas which will or will not work. He should never, of course, allow such convictions to influence him to dismiss summarily new theories and ideas, unless he has fully convinced the researcher and himself that there is no chance for the idea to succeed.

Without coordination of research projects, it is always very easy for the individual worker to follow a path which has more fascination and which just might lead to spectacular results. Some preliminary work on new and seemingly wild ideas is always indicated, but before too much time or expense are involved, the potential results of the research, if successful, must be carefully analyzed and calculated against probable costs. Close budgeting in research is as impossible as would be an absolute guarantee of results within a specified period of time. Research is a gamble, to a certain extent, but it should only be conducted with as thorough as possible an understanding of its potentialities. Top business management and executives of business departments who become very enthusiastic about research sometimes make the mistake of attempting to plot research on a time and yield basis, in much the same manner that they would plot an advertising and sales campaign. Enthusiasm for research by business executives is a great stimulus to success but can be a major damage to

a research program, if it is not coupled with an understanding of the limitations of research.

While there are some instances in which a fundamental research laboratory totally disassociated from the business may be of assistance to a business group, it would appear that these are the exception rather than the rule. In general, the research quarters of the research staff should be in the same area and closely adjacent to the manufacturing and business headquarters of the concern. In no other fashion can science and chemistry readily advance and thereby render a maximum service to the company. The disassociated research group cannot possibly understand the policies, problems and future possibilities of the business. Scientists have proven to be valuable consultants in sales and operating matters not directly concerned with the application of any fundamental scientific laws or principles. The happy, successful organization is one in which sales, manufacturing, and research can meet daily on a common ground of mutual appreciation and respect.

Can research be managed?

Should research be managed?

The answer to both questions is in our opinion, "yes." Research can be managed, if it is organized, promoted, and expanded on a common-sense basis adapted to the needs of the business which it serves. Research can be managed, if the research di-

CAN RESEARCH BE MANAGED

rector, assistant directors and section, group or division coordinators understand and appreciate the capabilities, ambitions and personalities of all those who work with them. Research can be managed, if the individual research worker makes it his business to understand his company, to want to solve its problems, and takes real pride in working with his executives who have earned his loyalty and confidence. Research cannot be managed in a militaristic fashion because it does not permit an understanding all the way down the line from the officer of the company in charge of research to the technical assistant in the process, product, or quality control work division.

Research should be managed, because it must be directed to the best interests of the company which supports it, both presently and for the future. Research should be managed, so that the money which is expended in research programs is not wasted

on improperly analyzed projects or on interesting problems quite far dissociated from industry. Research should be managed, because, today more than ever, the modern research laboratory is a team proposition. The physical chemist, the organic chemist, the analytical chemist, the biochemist, the physicist, the bacteriologist, the physiologist, the engineer, and many other scientists must cooperate on the solution of all major problems with the best knowledge and ingenuity that each possesses in his own field. Complete cooperation in research is essential to economic progress in the changing world that we all face today.

Was there ever a sports team that managed itself to success without a leader or a leader and a coach? Sound research management is firmly based on the best of human relationships and serves as an inspiration to the researcher in his achievements for his company and for a better America.

The Problems of Managing Research

(An Abstract)

Dr. S. M. Cantor

Corn Products Refining Company

A serious consideration of the topic, "Can Research be Managed," deserves an attempt at a definition of the two terms, management and research.

What we seek to define is the interaction of two very flexible op-

erations. This leads to perhaps the most important point, the mutuality of the two definitions. Because the inclusion of the word "critical" in a definition of research implies some form of management, just as the word "judicious" implies research, so the

statement of the question contains its own answer—which is, “Yes, research can be managed.”

In essence, it appears that no matter what the type of research problem or what the caliber of the research man, there must always be a measure of management, either self-imposed or imposed from an outside source of control. In our definition of management, there occurred the word judicious, and it is this element which comes into strongest play here.

The chemist wittingly or unwittingly has classified himself with the industrial side of our civilization. He has contributed to and become a part of modern industry. He must, therefore, recognize and accept industrial methods of control. If he is not satisfied by reason of his training, or because he receives inadequate professional recognition, then he must take steps to see that his successors are taught what to expect, or otherwise, that the conditions of his employment are so modified that he is more content. In this connection it is important to point out that the problem of antagonism to manage-

ment is not specific to chemists.

Many of the articles on research management which have appeared recently in our own chemical publications, and many suggestions on the part of particular groups of chemists, recognize dissatisfactions and seek to supply the solution to the problems which they present. Such items as relocations of laboratories, job classification systems, attendance at scientific meetings, salaries of laboratory personnel comparable to those of administrative personnel, more voice in choice of problems, sabbatical leaves for advanced study, these appear to be our attempts to eliminate the prevailing general complaints. It seems to me that chemical management and chemists who recognize the general character of these problems can take the lead in working out suitable answers, without sacrificing the prerogatives of management or the individuality of the chemist and his overall research efficiency. Only then can all of the questions implied in the subject, “Can Research be Managed,” be answered affirmatively.

The Best Research is Least Directed

(An Abstract)

Dr. Gustav Egloff, F.A.I.C.
Universal Oil Products Company

The subject, “Can Research be Managed,” is dependent on the answer to the question, “What is Research?” There are many phases of research, and some of these can be

managed effectively, while to other types, management is an impediment. The research conducted by any medium-sized or large company is now so vast a project that no one man can

CAN RESEARCH BE MANAGED

possibly know the details of all the studies which are being conducted. This fact is illustrated by the action of some companies in changing the title of "director of research" to "coordinator of research."

In exploratory research, it is important to leave the scientist alone. From such research comes the startling discoveries which eventually bring in enough money to more than pay for many years of research, even though the elementary discovery is not adapted for industrial purposes until five or ten years later. Many companies have taken the view that it is wise to leave workers alone to choose their problems. General Elec-

tric, for example, has operated on this policy for many years, and the notable contributions of Langmuir, Coolidge, Whitney, and others attest to its soundness.

It is wasteful for one man to see a development through from the exploratory stage to production. Experts in engineering should be called in at the pilot plant stage, and many kinds of specialists are needed as the development progresses.

The best research is that which is least directed but carried out by open-minded men who realize that they can profit from the cooperation of others.

Encourage, Not Manage, Research

(An Abstract)

Dr. L. M. Henderson

The Pure Oil Company

The subject of this discussion is expressed in unfavorable terms and it places the wrong foot forward. Our topic should read, "Can Research Be Encouraged?" That is the positive, sympathetic, and favorable way of looking at it. The use of the word "managed" in connection with research and research workers is psychologically bad. Let us rather try to develop a psychology of encouragement and do it in a forthright manner, for it is common knowledge that the greater the quality and quantity of research work turned out by a laboratory, the greater the credit to all

the personnel associated with that laboratory.

Supervisors of research should utilize the facilities and personnel of the laboratory in a manner that encourages constructive and creative thinking, alert observations, and cooperative attitudes. The supervision of research should be such that an employee soon discovers he is being helped and not "managed." The principle here involved is well-expressed by the familiar quotation, "Whoever will be chief among you, let him be your servant."

As organizations become larger and

larger, the question of *esprit de corps* becomes more and more important, resulting in an increasing need for an inspiration which will permeate the entire organization. Creative and inquisitive minds are more alert and more productive when under the healthful stimulus of encouraging inspiration.

Organized research aims to utilize manpower and brain-power efficiently. This may appear to be "managing research" but in reality it represents an effort to increase research productivity and is welcomed by the research worker wherever a spirit of fairness prevails. We include in this group all personnel engaged in development work, even though some people might

exclude them by narrow definitions of the term "research." The history of science, however, affords abundant evidence that many important discoveries have been made more or less incidentally by alert observers while conducting so-called planned or managed development work. Obviously such discoveries cannot be "managed" or prescribed, but they can be encouraged.

Research workers are naturally looking forward to the finding of new truths, new facts, or new substances. Their thoughts are positive rather than negative. Our language and our psychology should, therefore, stimulate forward movement and not resistance.

The Function of Management

(An Abstract)

Dr. Herman S. Bloch, F.A.I.C.

*Coordinator, Chemicals Research Division
Universal Oil Products Company*

Research embodies a series of functions associated with the generation, testing, and development of ideas. To be successful, research management must, first, provide adequately for the execution of every one of these functions; second, clearly define the responsibility for each function, and provide those responsible with authority commensurate with their responsibility; and third, see to it that each decision pertaining to research is made by the man or group of men most qualified by their knowledge, train-

ing, and experience with reference to the particular problem in hand.

Obviously, these requirements (particularly the third) cannot readily be met by the conventional, rigid, heirarchal organization in which permanent authority is vested in a title; they demand a fluid organization, a continual re-grouping of forces and of leadership to meet new problems. Under these requirements, it becomes the principal functions of management to procure able personnel; to evaluate them wisely; to delegate the

necessary responsibility and authority to the qualified individuals, and to protect research personnel from excessive bureaucracy and red-tape. Having done these things, management should step aside.



Dr. C. R. Downs, F.A.I.C., presented a paper on "The Economics of Producing 95 per cent Pure Oxygen," at a joint meeting of the Pittsburgh Section of the American Society of Mechanical Engineers and the Engineers' Society of Western Pennsylvania, in Pittsburgh, March 25th. Dr. Downs also served as moderator of the symposium on oxygen production and use.

Robert P. Russell, president of Standard Oil Development Company, announces that the technical groups of Pittsburgh Consolidation Coal Company, and the Development Company, are studying the possibility of applying the fluidized solids technique to coal carbonization and gasification of coal. The resulting gas could be converted into gasoline, diesel fuels, chemicals, and chemical raw materials. Studies are being carried out in a pilot plant near Pittsburgh. An additional pilot plant is planned to be located at Library, Penna.

E. J. Barth, F.A.I.C., is now with A. Johnson and Company Oil Refinery, Nynashamm, Sweden.

Palmer Enters Consulting Field

Dr. Henry F. Palmer, F. A. I. C., after twenty-one years with the Firestone Tire and Rubber Company, has resigned to enter private practice as a consultant serving the rubber and chemical industry. His headquarters are at 715 West Market Street, Akron, 3, Ohio.

Monsanto Chemical Company reports that its employment has risen twenty-one per cent during 1946, from 12,658 employees on January 1, 1946, to 15,319 on January 1, 1947. Sales for 1946 reached a record high and further increase is expected during 1947.

The 21st Exposition of Chemical Industries will be held in Grand Central Palace, New York, N. Y., the first week of next December, under the management of the International Exposition Company.



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New York Chapter, A. I. C., Awards Student Medals

The New York Chapter awarded student medals, at its meeting on March 21st, to the following students:

Guido Bonvicino,
Fordham University
Emanuel Friedman,
Brooklyn College
Mortimer J. Kamlet,
City College of New York
Sidney Katz,
Princeton University
Samuel Krimm,
*Polytechnic Institute of
Brooklyn*
Sebastian Mastrangelo,
Queens College
Herbert Q. Smith,
Rutgers University
Leon Zolondek,
*Washington Square College
(New York University)*

The medals were awarded in recognition of leadership, excellence in scholarship, and character.

A panel discussion of the opportunities in chemistry outside of the laboratory and manufacturing plant was featured. These papers will appear in a future issue of THE CHEMIST.

The American Oil Chemists' Society is holding its thirty-eighth annual meeting at the Hotel Roosevelt, New Orleans, Louisiana, May 20-22nd. Col. H. P. Newton, F.A.I.C., is general convention chairman.

General Motors announces that its "Train of Tomorrow" will soon start on a six-months' tour for exhibition purposes. The train embodies the latest contributions of scientific ingenuity to the comfort of travelers.

Signe Lidfeldt Sherman, F.A.I.C., is co-author with her husband, Joseph V. Sherman, of "The New Fibers", a book recently published by D. Van Nostrand Company, which covers developments in fibers and textiles during the past ten years.

Ora Blanche Burright, F.A.I.C., nutrition consultant, 5 Beekman Street, New York 7, N. Y., has published a booklet, entitled, "A Low Cost, Adequate Diet for a Family of Four." It is priced at twenty-five cents.

A. Cressy Morrison, Honorary member of THE AMERICAN INSTITUTE OF CHEMISTS, is the author of "Man Does Not Stand Alone," which, since its condensation in the December *Reader's Digest*, has now gone into its fourth printing.

Employment Contracts and Creative Research

Dr. Vandever Voorhees, F.A.I.C.

An abstract of a talk presented at meeting of the Baltimore Chapter, A.I.C.

OUR patent system was founded on the belief that progress in the arts would be stimulated by rewards commensurate with the value of the new contribution. This has been accomplished by the simple device of a monopoly granted for a limited time in exchange for public disclosure.

In recent years there has been discussion concerning the usefulness of patents in promoting the arts. Some point to the tremendous number of U.S. patents and conclude that the system is responsible for our high scale of living, the highest in the world. Others say Americans are just naturally progressive, more than other peoples, and that patents retard progress, or at best that the patent system should be given no credit.

To illustrate what has happened to productive efficiency in America, some data which were presented in the T.N.E.C. reports show an increase in production per man of about eight-fold from 1863 to 1928; they also show an increase in productive efficiency of about two-fold from 1909 to 1937.

In the past twenty years, I have seen the application of chemical engineering more than double the capacity per worker in oil refining and reduce the hours of work at the same time. In this period, wages have nearly doubled and the price of the main product—gasoline, a better product than we had twenty years ago—has gone down. This shows what benefits can flow from technical progress. You have seen the same thing in other industries.

The chemists and engineers to whom we must look to make these technical changes are today under contract to give their inventions to their employers, whereas twenty years ago many of them were free to develop their own ideas, and did so. Offhand, I can name Leo Baekeland, William Hoskins, George Borrowman, Fred Cottrell, and C. F. Burgess. The result was the establishment of new industries and new opportunities. Thurman Arnold has called inventors under contract, "Captive Inventors," and questions that the benefits of the patent monopoly should extend

to those not in a position to enjoy those benefits.

Employment contracts also often contain some restriction on the freedom of the employee to work for a competitor. The employee agrees not to remove reports or other property of the employer, and also agrees to respect confidential information.

Some companies do not have employment contracts for their chemists, and some of you can remember when very few employers required contracts. Most employment contracts were adopted about 1933 after the Supreme Court decision in the *Dubilier* case (17 USPQ 154). In that case, Lowell and Dunmore, two engineers working at the Bureau of Standards on radio problems, particularly ship radio receivers, invented an A. C. radio receiver which they had not been assigned to do. It was held that they had a perfect right to the patent on it.

This decision, and most of those which have followed it, forced employers of research workers to put them under contract to protect their investment in laboratories, salaries of research men, etc. A proper employment contract should give the employer the protection he needs, but should not burden the chemist-employee with restraints unnecessary to this protection.

There are two common faults in many employment contracts. The first is that chemists not employed in

research or other than routine work are often required to assign inventions they may make. Obviously this is obtaining services without proper consideration. The second common fault of many contracts is failure to distinguish between inventions in the field of the employer's interest and others entirely outside that field. No chemist should submit to being bound by a contract which ties him up in such a way that he is not free to develop ideas in which his employer is not interested or equipped, to develop.

Carlton Hill, a well-known Chicago patent attorney, divides agreements into three classes, depending on whether they assign rights to inventions of every type, or inventions relating in any way to the employer's business, or only those inventions falling directly within the scope of the employer's business. Under an agreement of the first type, Hill says:

"We may have a case where a man hired to sweep floors in an aircraft plant would be obligated to assign to his employer an invention pertaining to a toothbrush invented during his spare time."

The following are some other provisions found in contracts, studied by our committee, which seem either unfair or unnecessary:

Inclusion of "related," "affiliated," and "associated" companies as co-employer and requirements

EMPLOYMENT CONTRACTS AND CREATIVE RESEARCH

to assign inventions related to any of their business.

(The business of such "affiliated" companies is often quite unrelated to that of the employer. Recalling the doctrine of the *Dubilier* (17-USPQ 154) case in which the Supreme Court limited the employer's right in the absence of a contract to those inventions which employee was specifically requested to make, it appears that the employee should not be requested to assign inventions entirely unrelated to his work. It is even questionable whether subsidiaries may fairly be included with the employer company as an entity.)

Requirement to assign inventions made previous to employment.

Requirement to assign all inventions in the particular field made within an extended period, e.g., two years, after leaving employment.

List of all previous inventions required. (Employee may not have access to his records. Also, he may be prevented by previous contract).

Employer decides if the invention is patentable to the employee, with no appeal.

Unrelated inventions must be disclosed to employer who is given the right of purchase or refusal before employee may offer to others.

Invention reverts to employee if employer fails to "take steps" to file within six months. (This pro-

vision is obviously too indefinite to be enforceable and six months is too long a delay to protect the invention in many cases). Employer pays assignment fee as high as \$50.00 or \$100.00.

From our study we drafted a model contract which we expect to have published shortly. Much of the material in this contract appeared in the May, 1946, issue of *THE CHEMIST* as a report of the Committee on Contracts.



An International Exposition of Textile Machinery, Equipment and Supplies, is scheduled to be held in New York in April 1948. Information may be obtained from Arthur Tarshis, 36 West 47th Street, New York, N. Y.

The U. S. Civil Service Commission announces an examination for probational appointment to the position of aeronautical research scientist with the National Advisory Committee for Aeronautics, at laboratories in Washington, D. C., Virginia, California or Ohio. Applicants should have training in engineering, physics, chemistry or mathematics and demonstrated ability to do research in fundamental problems related to aeronautics. Salaries are from \$3397 to \$9975 per year. Forms may be obtained from the U. S. Civil Service Commission, Washington 25, D.C.

Necrology

Robert W. Hindley

We have just been informed of the death of Robert W. Hindley, 537 Greenland Ave., Oconomowoc, Wisconsin, in May of 1946.

Mr. Hindley was born in Racine, Wisconsin, in 1876, and was educated at the University of Wisconsin. He specialized in dairy products, essential oils, foods, packing house products and metals. His experience included work with Armour & Company, Chicago; independent farming and dairy management; and service as chemist to the Horlick Malted Milk Company, Racine, Wisconsin, and to the Crandon-Forest Company, Crandon, Wisconsin. He became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in August, 1923.

Philip A. Greco

Philip A. Greco, head of the Biochemical Division, Fleischmann Laboratories, 810 Grand Concourse, New York, N. Y., died January 16th, at the age of 32.

Dr. Greco was born in Rochester, New York, and was educated at the University of Illinois and Iowa State College, obtaining the Ph.D. degree from the latter institution. From 1941 to 1943, he served as research

associate at Iowa State College and from 1944 until his death he was head of the Biochemical Division of the Fleischmann Laboratories.

He specialized in food chemistry, biochemistry, protein chemistry, and microbiological chemistry.

Dr. Greco became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1946.

John Francis Hammond

Rev. John Francis Hammond, O.S.A., a member of the chemistry staff, Villanova College, died September 4, 1946, at the age of fifty-one. Rev. Hammond was born in Philadelphia and received the B.A. and M.A. degrees from Villanova College, followed by graduate study at the University of Chicago and at Armour Institute. He was ordained a priest, July 2, 1919, by Archbishop Messmer of Milwaukee. He taught in the parochial high schools of Chicago until 1935 when he accepted a faculty position at Villanova. He specialized in the biological sciences, particularly physiology, and in organic chemistry. He was the author of a number of articles in university publications. Rev. Hammond became a Fellow of THE AMERICAN INSTITUTE OF CHEMISTS in 1938.

Committees

Annual Reports 1946-47

LICENSURE

Three active measures for improving the professional status of the chemist have been taken within the last year.

The Chemists Registration Act of Ohio was presented before the Legislature by Assemblyman Paul Barnes of Columbus as House Bill 293. The Ohio Chemists' Committee on Professional Practice, which formulated and sponsored the bill, included representatives from the membership of eight Ohio American Chemical Society Sections, THE AMERICAN INSTITUTE OF CHEMISTS, the American Electroplaters Society, the Ohio Academy of Sciences and Alpha Chi Sigma. The bill presented was the third draft drawn up after careful study and was patterned after the Engineers and Surveyors' Registration Act of Ohio.

The Illinois Chemistry Practice Act was prepared as a model bill by the Professional Status Committee of the Chicago section of the American Chemical Society. It has not been introduced in the Illinois Legislature.

The National A.C.S. Committee on Professional and Economic Status conducted a poll of the membership to obtain expressions of opinion on various phases of professional registration, licensing, and certification of

chemists. Copies of the Ohio and Illinois Acts were included with an extended questionnaire, brief arguments pro and con, and a list of references. The vote reported at the A. C. S. Councilors' meeting on April 12th was 9592 for and 9276 against a bill like the Ohio bill. Ohio A. C. S. members voted 765 for, and 676 against the bill. A majority therefore favored it in both cases.

—Gustav Egloff,
Chairman.

EMPLOYMENT

In view of the very satisfactory state of supply and demand for chemists and chemical engineers, your chairman has not thought it either helpful or desirable to call a meeting of the Employment Committee.

Other groups in a better position to initiate and carry out plans for an increase in the supply of chemists and chemical engineers are quite active and apparently in no need of help at this time from our Institute. There is, accordingly, nothing to report at this time other than satisfaction at the completeness with which the profession is employed.

It should be recorded, however, that chemists and chemical engineers, like most other white collar workers,

have not had salary adjustments, except perhaps in some of the very low brackets, compensatory for the depreciated value of the dollar with which they are paid. It is obvious that supply and demand will sooner or later bring about this adjustment, but within the last year our group has been at some disadvantage with respect to others. This cannot continue too long without seriously retarding the building up of a supply of chemists more nearly equal to the demand, which balanced condition is desired by all.

—Frank G. Breyer,
Chairman.

CIVIL SERVICE CLASSIFICATION AND PROMOTION

A letter dated July 26, 1945, addressed to the Committee Chairman, advised that the following members of the INSTITUTE had been named as members of the Committee on Civil Service Classification and Promotion: L. F. Rader, Jr., O. E. May, W. L. Hill, E. M. Hewston, and F. O. Lundstrom (Chairman). Dr. May was unable to serve and Mr. L. N. Markwood was named in his place.

The Committee was appointed for the specific purpose of considering proposals contained in letters from F. O. Lundstrom to Dr. Egloff on May 1, 1945, and to Dr. Hamlin on May 16, 1945. These letters called attention to the fact that certain

federal civil service regulations needed changing. The letters pointed out that many workers are advanced by automatic promotion to the top of one of the grades and then are held there indefinitely, even for the entire remainder of their careers, without further promotion, in spite of additional education, experience and increased value to their employer.

As a first step in rectifying this injustice, it was suggested that the Institute send out 2,000 questionnaires to federal chemists in order to obtain first-hand information concerning the extent to which these workers have been affected by the present regulations regarding grade re-allocation.

The Committee met for final action on September 26, 1945. At this time the preliminary work by the Chairman and others was considered. A final report, and also a sample questionnaire, to be sent to federal chemists, were drawn up and submitted to the Council through the National Secretary.

The report recommended that the questionnaire be sent out to federal chemists and that further action of the INSTITUTE be based on the replies received. If the replies suggested that the present regulations should be changed, the facts indicated by the questionnaires should be presented to the heads of as many professional organizations as possible with a view to forming a joint committee to study the matter and to evolve

COMMITTEES' ANNUAL REPORTS

and suggest remedial changes in the law which should be brought to the attention of the proper legislative committees.

It was pointed out that the questionnaires would also create very favorable publicity for the INSTITUTE.

It had been hoped that a mailing list could be obtained from the National Roster. However, Dr. W. T. Read informed us that the registrants had not been coded according to source of employment so that in order to secure the information, the examination of more than 70,000 records would be necessary; which, of course, is impracticable. It will, therefore, be necessary to compile a mailing list from other sources.

The Committee feels that in order to eliminate unnecessary work, the compilation of a mailing list should await definite action by the National Council concerning the questionnaire.

For various reasons, the Council during 1946 failed to consider the recommendations of this Committee. Further progress in the matter therefore is dependent upon future action by the National Council.

—Frank O. Lundstrom
Chairman

NATIONAL LEGISLATION AFFECTING CHEMISTS

Your Committee on National Legislation Affecting Chemists has carefully followed its assigned subject

during the past year. Highlighting all such legislation is that pertaining to the National Science Foundation and this report is concerned primarily with it. In preparing this report, the Chairman of the Committee had the benefit of direct contact with a leading figure engaged in drafting proposed legislation.

When the 79th Congress ended in 1946, it had passed no bill dealing with a science Foundation, although a considerable volume of testimony entered the record and one such bill passed the Senate. The present (80th) Congress has benefitted from the hearings and public expressions of opinion that were elicited; consequently the efforts of last year were not wasted but on the contrary make it likely that a bill will be enacted in the near future—a bill that comes close to representing the best compromise on this hotly debated subject.

Practically all elements of our public life agree on the desirability of some broad measure to promote science in the United States. Disagreement enters, however, on the scope of such a project and the administrative arrangement to operate it. Debate over previous bills brought out objection to (1) inclusion of social sciences, (2) changes in handling of patents, and (3) a single administrator with practically autonomous powers.

Having in mind these objections, and in order to produce a bill that would be politically acceptable to a

majority of Congress, Senator H. Alexander Smith, of New Jersey, introduced a bill (S. 526) on February 7, 1947, which, as subsequently amended, seems to crystallize efforts in a fruitful direction. This bill is bi-partisan in that it bears the names of four Republicans and three Democrats, including Senator Elbert D. Thomas (D), who withdrew his own previously presented bill to join forces with Senator Smith.

S. 526 enumerates the "mathematical, physical, medical, biological, engineering and other sciences" as its territory; it does not specify social sciences nor does it specifically exclude them; the door is left open for the governing body to apply its own discretion as to if, how, and when these or other sciences shall be considered. The bill is also devoid of specific instructions on patent rights that may result from research sponsored thereunder. Its stated responsibility is simply to protect the public interest and the equities of contractual parties. Each contract would contain appropriate provisions to meet this responsibility.

With respect to administration of the Foundation, there would be a body of twenty-four members appointed by the President and approved by the Senate. These persons—recognized leaders in science, engineering, education or public affairs—are to be selected solely on merit and with due consideration to the nominations of

scientific or educational organizations, including the Association of Land Grant Colleges and Universities, and the National Association of State Universities. An Executive Committee of nine is to be chosen by the Foundation, which Committee is to appoint a Director at an annual compensation of \$15,000. Attention is directed to the fact that administration of the Foundation rests, first, upon a broad base of part-time authorities, next, upon a smaller group of more immediate supervisors, also part-time—and lastly on a full-time individual who directs under prescribed conditions. The bill's sponsors believe that this stepwise focusing of responsibility and power provides the best type of administration for so important a project.

Under the terms of the bill, the Foundation is to support basic research in the sciences through grants, loans, and other means; also, research related to national defense; to grant scholarships and fellowships; and to correlate the Foundation's program with private research and with projects of other public agencies. The latter authorization implies that existing Government branches would be free to develop their own projects as in the past but the government's over-all program of research would undoubtedly be strengthened by the Foundation's broad correlation. Emphasis is placed on basic research as the Foundation's prime field of

COMMITTEES' ANNUAL REPORTS

operations, hence the field of applied investigation is wide open to industry and others, except for the intrusion that national defense might dictate.

Four bills, identical with S.526, have been introduced in the House. Another, presented by Congressman Emanuel Celler of New York (H.R. 942), repeats the terms of a bill presented by him in the previous session. Its salient differences from S.526 lie (1) in a presidentially-appointed Administrator to administer the affairs of the Foundation, acting upon the advice and counsel of a National Science Board; and (2) specific inclusion of the social sciences.

The foregoing two types of bills are the only bills on a Science Foundation now pending before Congress (April 11). It would appear, from a survey of available opinions, that the Smith bill as amended is likely to be enacted into law during this session.

Chemical and Engineering News recently conducted a forum in its columns on a National Science Foundation. Judging from responses, opinions of the chemical profession differ markedly on fundamental issues. Several members of the INSTITUTE presented their views, including Messrs. Egloff and Farber of this Committee.

President Truman, by Executive Order of October 17, 1946, established an interdepartmental board known as the President's Scientific Research Board for the general purpose of studying scientific research

and development activities. This study embraces both federal and non-federal activities. It is reported that the Board, which is composed of cabinet officers and other high-ranking Government officials, will shortly submit a report on its initial investigations. The objective behind creation of this board is to insure that federal research activities contribute effectively toward national defense, upbuilding of the domestic economy, and increase of fundamental knowledge. S.526 provides for an interdepartmental group of similar purpose.

On the subject of atomic energy, the McMahon bill which was passed last year established a civilian Atomic Energy Commission. Confirmation of the President's nominees for commissioners was given by the Senate on April 9th. The Army therefore bows out as arbiter of atomic research. The impact of atomic investigation on chemists' activities can be only imagined at this time but your Committee does not doubt that it opens a wide path of unending possibilities.

—L. N. Markwood, chairman

QUALIFICATIONS

The Committee on Qualifications considered all applications for membership submitted to it during the past year and reported its findings to the National Council for action.

—Howard S. Neiman,
Chairman

EMPLOYMENT CONTRACTS

The Committee on Employment Contracts has no report to make this year. In January, I consulted with a majority of the committee members, and it was felt that any revision of previous reports should await the merger of the INSTITUTE with the American Chemical Society. At that time there will presumably be an amalgamation with the Society's committee on economic status and a review of employment contracts will undoubtedly be made by a new group.

—H. G. Lindwall
Chairman,

PROFESSIONAL STATUS

Several of the larger measures concerning professional status have been handled directly by the National Council during the past year. No referrals have been made to the Committee and no Committee meetings have been held.

—E. H. Northey
Chairman

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PATENTS

No major patent legislation has been passed upon by Congress. Recently, a bill was introduced (H.R. 2520) which proposes to increase the fees of the Patent Office. Similarly, House Bill H.R. 2660 has recently been introduced to provide for oppositions to the grant of patents similar to the European practice. Several bills (H.R. 65, 124, 1107, and 1984) have been introduced to provide for extension of terms of patents for various reasons arising out of the war. In due course, all of these bills should be opposed. Some bills on National Science Foundations are being proposed which have patent clauses. These bills are as follows:

Number	Name
H.R. 942	Celler Bill
H.R. 1830	Mills Bill
S. 526	Smith Bill

Senate Bill S. 72 relating to Anti-Monopolies was introduced by Senator Morse. As these bills contain patent clauses, we may wish to consider them in the near future. When the time is right for taking some action, we shall advise you.

—A. W. Deller
Chairman

Note

Proceedings of the Annual Meeting and other Committee and Chapter reports will appear in the June issue of THE CHEMIST.



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March Meeting

The 235th meeting of the National Council was held March 25, 1947, at The Chemists' Club, New York, N. Y. President Foster D. Snell presided. The following officers and councilors were present: Messrs. S. R. Brinkley, H. L. Fisher, L. H. Flett, F. A. Hessel, H. S. Neiman,

F. D. Snell, H. H. Tucker, L. Van Doren. V. F. Kimball was present.

The minutes of the previous meeting were accepted.

A circular containing testimonials was read, and referred to the Committee on Ethics.

A letter from the Automobile Club of New York concerning a bill which

would require licenses for those operating car parking lots, was referred to the New York Chapter.

A letter was presented from the South American Institute of Petroleum, which invited The INSTITUTE to appoint delegates to the first South American Congress of Petroleum to be held in Lima, Peru. Upon motion, Dr. Gustav Egloff was appointed delegate to this Congress.

A letter from the Los Angeles Chapter of the INSTITUTE, concurring with the recommendations made by the Louisiana and Niagara Chapters on the proposed coalition, was presented.

The secretary read a letter from Mr. George Rhodes of the Senate of the State of Delaware, who stated that the legislation in Delaware Senate Bill No. 75, protested by the Institute, had been stricken from the calendar.

The Treasurer's statement of finances was accepted.

A letter was presented from the Association of Municipal Chemists of the City of New York, to the effect that no action has been taken on their appeal for suitable salaries, despite recommendations submitted by the INSTITUTE to the various city officials last fall.

Upon motion, the president was requested to appoint a committee of three to meet with the spokesman for these chemists, and to report back to the National Council at its next

meeting, recommending action to be taken. The following committee was appointed: Mr. L. H. Flett, chairman; Dr. Donald Price, vice-chairman, and Dr. R. E. Kirk.

The Committee on Nominations reported that the nomination ballots sent to the members had been counted and that the results require the following names to appear on the election ballots, in the order of the number of nominating votes: E. H. Northey, L. T. Work, L. H. Flett, W. J. Sparks, Vanderveer Voorhees, and J. M. McIlvain.

The program for the annual meeting, to be held May second, was presented.

The report of the Committee on Ethics was accepted.

An invitation was presented from the International Congress of Pure and Applied Science, requesting the Institute to send a representative to its meeting in London July 14-24th. Concurrently with this meeting, the centenary of the foundation of the Chemical Society of London will be held. Upon motion, Dr. F. D. Snell was asked to represent the INSTITUTE at these meetings.

Dr. Snell stated that several applications for membership had been requested by individuals who are looking forward to the consummation of the coalition, and that he expected to speak before the Western Pennsylvania Chapter on April eighth.

The proposed by-laws for the gov-

COUNCIL

ernment of the INSTITUTE, if the coalition goes into effect, were presented to the councilors.

The following new members were elected:

Fellows

Foss, Noel E.

Director, Pharmaceutical Application Laboratory, Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J.

Helm, David Farrow

Senior Industrial Research Fellow, Mellon Institute of Industrial Research, Pittsburgh, Penna.

Swan, Stewart Duffield

Research Chemist, The Dentist's Supply Company, 220 West 42nd Street, New York 18, N. Y.

Taebel, Wilbert A.

Director, Department of Chemistry, Eimer and Amend, 635 Greenwich Street, New York 14, N. Y.

Raised from Associate to Member

Raithel, Edward E.

Owner, Raithel Chemical Laboratories, Analytical Chemists, Bradford Woods, Penna.

There being no further business, adjournment was taken.

Joseph F. Padlon, F. A. I. C., is teaching an intensive evening course in "Business Management and Organization" at the School of Commerce, New York University.

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Lamenzo

The Chapter met on January 16th at the School of Pharmacy of the University of Maryland to hear a most informative lecture on "The Chemistry of Glass", by Mr. Ronald Lester of the Maryland Glass Works.

Mr. Lester instructed the group in the chemical structure of glass, changes in composition to fill certain needs, methods of coloring glass, and problems in modern manufacture. He also described progress being made in new types of glass. The lecture was informal, and well-illustrated with graphs, charts, and samples of different types of glass.



Students at Polytechnic Institute of Brooklyn, New York, may now, for the first time, elect courses in plastics technology as their specialty. The degree will be the usual chemical engineering diploma.

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Secretary-Treas., Mary L. Alexander
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Chicago, Ill.
Council Representative, Martin de
Simo
Reporter to THE CHEMIST, Madge
M. Spiegler

On March 28, the Chicago Chapter enjoyed an open meeting in the Electric Club. Dr. J. E. King, director of testing, Science Research Associates, presented his subject: "The Aptitude, Interests, and Emotional Patterns of the Research Chemist" in an interesting fashion by employing the use of a table showing the pattern of a physical scientist.

Following Dr. King's talk, Chairman C. A. Johnson introduced Dr. E. R. Serles, dean of the College of Pharmacy of the University of Illinois. Dr. Serles commented briefly on aptitude and character trait testing in the field of pharmacy.

Dr. Johnson next invited questions and comments from the audience and under his direction a general discussion period rounded out the evening.

Dr. Egloff was guest speaker on the "Science Forum" radio program of the General Electric Company, WGY, Schenectady, on April 23rd. His subject was, "The Significance of Petroleum in a Modern World."

Annual Reports 1946-47

CHICAGO

The Chapter Council met on June 18th and again on September 23rd, 1946, in order to select committee personnel, create new committees and to give general direction for the activities of the Chapter for the remainder of the year.

On October 4th at a dinner meeting, Dr. Ward Vinton Evans was awarded the Honorary Scroll of the Chapter for 1946 for outstanding achievements in the field of chemistry as a great teacher, as an industrial consultant, and for his high civic spirit. Speakers: Dr. Franklyn B. Snyder, "Ward Evans—My Friend and Colleague"; Dr. Gustav Egloff, "Ward Evans—Teacher, Scientist and Citizen." In accepting the Honor Scroll, Dr. Evans spoke of his experiences with the army universities at Shrivenham, England, and Biarritz, France. (See CHEMIST, Nov. 1946.)

On December 13th, the first regular meeting of the year, a panel discussion on the question, "Should the Supply of Chemists Be Regulated?", was led by five prominent Chicago chemists: J. Bjorksten, M. T. Carpenter, A. L. Elder, V. I. Komarewsky and C. L. Thomas.

An Emergency business meeting was held on January 20th to discuss the proposed merger of the INSTITUTE with the American Chemical Society.

It was the consensus of the group that such an affiliation was desirable.

On February 7th, Dr. H. E. Robinson discussed the question "Can Research Be Managed?" Audience participation in the discussion that followed was led by a panel composed of H. S. Bloch, S. M. Cantor, Gustav Egloff, and L. M. Henderson.

On March 28th, Dr. J. E. King, director of testing, Science Research Associates, spoke on "The Aptitude, Interests and Emotional Patterns of the Research Chemist." A lively discussion period followed his address.

The annual meeting of the Chapter is scheduled for May 16th at which time new officers will be elected and installed, reports of various standing committees will be received and, in addition, it is planned that Dr. Foster D. Snell, president of the INSTITUTE, will be present.

Another significant activity of the Chapter is the annual recognition of outstanding scholarship in chemistry among college students in Chicago and neighboring cities. This year, medal awards for excellence in chemistry will be presented to Howard E. Holmquist of Northwestern University, Harold Padolsky of Illinois Institute of Technology, Robert John Pavlin of Notre Dame, Alice Misgades of the University of Illinois, Virginia Ellen March of the

University of Wisconsin, Harold Leo Friedman of the University of Chicago, and James B. Henderson of Purdue University.

On May 18th, the Chapter will act as co-sponsor of a lecture on "New Developments in Pesticides," by Dr. E. D. Whitman, Ohio State Research Foundation. This is one of a series of lectures given at the Chicago Museum of Science and Industry.

—C. A. Johnson
Chairman

NEW JERSEY

The New Jersey Chapter of the THE AMERICAN INSTITUTE OF CHEMISTS was incorporated on May 14th, 1946, under the statutes of New Jersey 1937, Title 15:1-1. The first official meeting was held on September 23rd at the Public Service Auditorium in Newark, N. J., with Mr. Sidney Kirkpatrick as the speaker. The subject was the "Bikini Atomic Bomb Test" which was extremely timely, and the meeting was very well attended.

The second meeting was held on December 9th, jointly with the North Jersey Section of the American Chemical Society. Mr. A. Emery and Dr. F. D. Snell were the speakers.

A council meeting was held on November 18th, during which plans for the remainder of the year were made. A committee was appointed to study the feasibility of or-

ganizing small sub-groups for discussion of professional problems on an intimate or fraternal basis, and one such meeting has been held as an experiment.

Plans are well under way to conduct an excursion to the Hoffman-La Roche plant in Nutley, N. J., early in June.

—Harry Burrell
Secretary

LOS ANGELES

The Los Angeles Chapter has met three times this year.

Chairman Charles Henning resigned in March; he has been transferred by his company to Pittsburgh; Dr. Albert Salathe of Long Beach, vice president, has assumed the chairmanship.

Discussions have centered around licensing and professional status. R. J. Abernethy spearheaded the discussions and made very fine distinctions in defining "profession" and the priority of professionalism over licensing. The Chapter was in favor of the merger with the A. C. S. by a large majority.

The Chapter lost by death one of its most active members, Dr. Henry Boddington.

We look forward to an increase in membership in the fall, because of new interest in professionalism.

—Albert Salathe
Chairman

CHAPTERS' ANNUAL REPORTS

NEW YORK

The Chapter planned to alternate its meetings with the newly formed North Jersey Chapter on the basis of a general theme of timely technical and professional meetings.

Our excellent committee, under the chairmanship of Mr. L. H. Flett, arranged a program that included discussions of lubricants, petroleum hydrocarbon research, furfural, the economic outlook for 1947, a discussion of the coalition, and a panel review of extra-laboratory opportunities for chemical graduates.

The Chapter Treasury was augmented by some \$450 through the efforts of our Treasurer, Dr. L. W. Seigle, and Mr. Harry Bennett of the Chemical Publishing Company, who undertook to handle without charge the Chapter's printing and mailing.

The Council was quite active in its efforts to expand the Chapter's influence in professional matters. The Councilors were keenly conscious of their responsibility to membership, and in this sense unanimously authorized the dispatch of a letter to the National Council requesting deferment of the coalition vote beyond May, 1947. It was their opinion that sufficient consideration will not have been given the subject prior to the annual meeting. It was further decided, after a special Council Meeting, to which Dr. Foster D. Snell was invited, to arrange a spe-

cial "Coalition" meeting to discuss the future of THE INSTITUTE should the A.C.S. accept the coalition proposal at Atlantic City. This meeting was set for April 25th in New York City.

In addition to gratitude for the efforts of the Officers and Councilors, the writer is indebted for the excellent cooperation exhibited by the following committee chairmen:

Mr. L. H. Flett, Program; Mr. Harry Bennett, Publicity; Mr. L. Koberlein, Membership; Dr. Carl Bremer, Printing; Mr. Byron Thompson, Entertainment; Dr. M. J. Kelley, Arrangements.

—John J. Miskel
Chairman

NIAGARA

The Niagara Chapter has had an active and successful year. Gains and losses in local membership have shown a net increase of two to reach the all-time high of sixty.

Three regular meetings have been held to date. At the first, Dr. Snell spoke on "Chemistry — A Profession". His outline of pre-requisites for professionalism led to a very interesting discussion as to how establishment of the pre-requisites might be obtained.

Mr. Marvin Udy of Niagara Falls, N. Y., described his recent observations of South American nations and resources with particularly sympathetic feeling for the people. There is, south of the border, a surge of

ambition for economic renaissance, resulting in prosperity in some areas, but widespread lack of educational and especially material resources make the lot of the common man a poor one. The daily wage of the laborer is less than two dollars, yet because of high material and production costs the results of his efforts cost as much as in this country and his meager earnings provide no buying power.

Mr. Carl Masters of East Aurora, N. Y., discussed "Science or Technology". The application of mathematical and scientific principles to the philosophy of living by men of good heart is essential, if we would avoid utter confusion and destruction. Where scientists prostitute their knowledge of technology for selfish purposes without regard to the good of man and science as a whole, the result may be seen in the degenerate "doctors" now before the bar of justice in Europe.

There appears to be considerable uncertainty regarding the future of the INSTITUTE. Unusually aggressive leadership will be necessary both locally and nationally in the coming year. In the union of efforts with the A. C. S., quality of the leadership will determine which part of the organization will "take over" the professional activities which are the only reason-for-being of the INSTITUTE.

—F. Sievenpiper
Chairman



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"Processes, Hazards and Protection Involved in the Manufacture of Spirituous Liquors," Research Report No. 5. National Board of Fire Underwriters, 85 John Street, New York 7, N. Y.; 222 West Adams Street, Chicago 6, Ill., or Merchants Exchange Bldg., San Francisco 4, California.

"A Trip Through Hercules Land", a four-color, non-technical booklet, shows Hercules' product utilization in major industries. It is available from Hercules Powder Company, Wilmington, Delaware.

"Electrolytic Conductivity Curves." Chart Sets for NaCl, HCl, NaOH, CaCl₂, H₂SO₄, acetic acid, and chromic acid. Each set bound in individual folders. \$1.50 for first set \$1.25 for second set, and \$1.00 each for subsequent sets. Industrial Instruments, 17 Pollack Ave., Jersey City 5, New Jersey.

"Rubber", illustrated 32-page booklet on natural and synthetic rubber. Three-million copies have been supplied to schools. The Firestone Tire and Rubber Company, Akron, Ohio.

"Obtaining Industrial Information from Germany." Prepared by the Office of Technical Services, Department of Commerce. Issued by Patents and Research Committee, National Association of Manufacturers, 14 West 49th Street, New York 20, N.Y.

"Toxaphone — A chlorinated hydrocarbon with Insecticidal Properties", Bulletin No. 264. It may be obtained on request from the University of Delaware Agricultural Experiment Station, Newark, Delaware.

"Catalog of Auxiliary Publications in Microfilms and Photoprints", 1946. American Documentation Institute, 1719 N Street, N.W., Washington 6, D. C. Free on request until first edition is exhausted.

"The Dyeometer: An Instrument for Studying Color Reactions," by Kienle, Royer, and McCleary, Calco Technical Bulletin No. 792, reprint from *Textile Research Journal*. Available from Advertising Department, Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J.

"Aldehydes" (Form 5278). Properties and specifications of industrial aldehydes. Carbide and Carbon Chemicals Corporation, 30 East 42nd Street, New York 17, N. Y.

"The Disposal of Synthetic Ammonia Plants", 4th supplementary report of the War Assets Administration to the Congress on chemical plants and facilities. War Assets Administration, Washington, D. C.

"Kyanite and Synthetic Sillimanite in Germany; PB-34809", a report on Germany's use of artificial sillimanite as a substitute for Indian kyanite, 11 pages. Photostat, \$1; Microfilm \$1.00. Office of Technical Services, Department of Commerce, Washington 25, D. C.

The New York State Department of Commerce, 112 State Street, Albany 7, New York, has issued a "Directory of Research and Development Facilities at Educational Institutions in New York State." It is available to industrial concerns on request.

"Ultra - Violet Monochromators," Bulletin 801. Descriptive list of six instruments. Available from Farrand Optical Company, Inc., Bronx Blvd. and East 238th Street, New York 66, N. Y.

"DC Silicones, New Engineering Materials." New revised catalog to replace the green, 1946 edition. Dow Corning Corporation, Midland, Michigan.

"The Dyeing and Lanaset Resin

Treating of Wool Hosiery." Calco Technical Bulletin No. 783. Available from the Advertising Department, Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J.

"Fire and Explosion Hazards of the manufacture of Synthetic Rubber." Research Report No. 4, available on application to National Board of Fire Underwriters, at 85 John St., New York 7, N. Y.; 222 West Adams St., Chicago 6, Ill.; or Merchants Exchange Building, San Francisco 4, Calif.

"Cyanamid's Nitrogen Chemicals Digest", a booklet containing summaries of new products offered for research and development. Request it from Synthetic Organic Chemicals Department, American Cyanamid Company, 30 Rockefeller Plaza, New York 20, N. Y.

"DAG Colloidal Graphite as a Parting Compound." Bulletin No. 422. Acheson Colloids Corporation, Port Huron, Michigan.

"Hercules Products for Protective Coatings", a four-page folder of listings according to use. Hercules Powder Company, Wilmington, Del.

"DC Anti-Foam A." Technical Pamphlet, Dow Corning Corporation, Midland, Michigan.

"Collective Bargaining: How to Make it More Effective," a report prepared by the Research and Policy Committee of the Committee for Economic Development, 285 Madison Avenue, New York 17, N. Y.

"DC 2103, Thermosetting Silicone Resin", (Number C 20-2 of *Silicone Notes*) is available from Dow Corning Corporation, Midland, Michigan.

"Index of Safety Films." Price 25 cents per copy. Available from National Safety Council, 20 North Wacker Drive, Chicago 6, Illinois.

"The Production Outlook for 1947." Civilian Production Administration, Office of Temporary Controls, Washington, D. C.

A sound motion picture, "Death to Weeds," of two reels in length, is made available to interested groups by the Dow Chemical Company. Write to Millard Hooker, The Dow Chemical Company, Midland, Mich.

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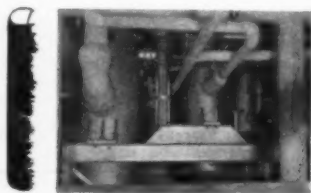
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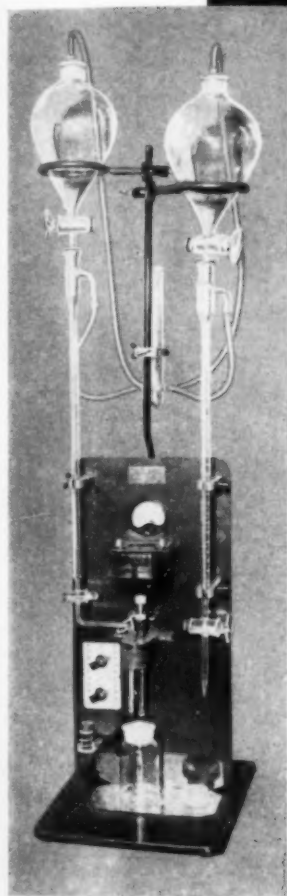
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